

REMARKS

Claims 1-30 are pending in the application and are presented for the Examiner's review and consideration. Claims 1 and 9 have been amended. Applicant believes the claim amendments and remarks herein serve a useful clarification purpose, and are desirable for clarification purposes, independent of patentability. Accordingly, Applicant respectfully submits that the claim amendments do not limit the range of any permissible equivalents. No new matter has been added.

Allowable Subject Matter

Applicant acknowledges with appreciation that claims 10-12, 16-22, and 27 were indicated as being allowable if rewritten in independent form. In this Response, Applicant has not rewritten the claims in independent form pending the Examiner's consideration of the claim amendments presented herein.

35 U.S.C. §103 Rejections

Claims 1 and 29 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,889,066 to Neil *et al.* ("Neil") in view of U.S. Patent No. 6,619,224 to Syfritt ("Syfritt"). In response, Applicant respectfully submits that this rejection should be withdrawn.

Neil discloses a self-propelled, submersible, two-man vehicle having a hull. The hull includes an upper hull wall and a lower hull wall. The hull walls may be made of fiberglass and are shaped to obtain the lowest possible coefficient of friction. The hull includes a cockpit having side walls and end walls forming the enclosure of the cockpit. (col. 3, lns. 29-53). The hull defines an open accessway to the cockpit to allow passengers unimpeded access to the cockpit from the underside of the hull. Means are provided for supplying air to the cockpit to form an air bubble large enough to allow the passengers to breathe freely with the cockpit. (col. 1, lns. 53-58).

Syfritt discloses a modular marine vessel having a variable hull and a plurality of boat forming modules including a bow section module, a load section module, and a bulkhead forming module. (abstract) Each vessel forming and bulkhead forming module includes a

topside section and a hull bottom side section, and the load and bow section modules that are connected end-to-end are sealingly juxtaposed the detachably connected bulkhead forming module to prevent water from entering the vessel when said vessel engages water. (col. 4, lns. 10-15). The invention includes a fail-safe sealing system that has unique capabilities while in a water environment. Each seal is designed for minimum wear that is caused by recurring assembly, disassembly, and actuation of the variable hull. The seals are water-tight, and easily formed as an integral part of each assembled unit as each juxtaposed module is attached together by three basic sealing systems. (col. 7, lns. 45-51). The boat has a plurality of flexible containers, which are sponsons that each define an inflatable chamber. The rounded ends of each flexible container or sponson fit and detachably connect to ring connectors of each bulkhead forming module and are shaped to fit within the space formed by six through rods. (col. 7, ln. 65 to col. 8, ln. 4). The structure used in an inflatable hull is the same boat frame used in a rigid hull design. It provides for both the modularity and the variable hull along with another unique aspect for the inflatable version. For if all of the air is removed from every chamber in the vessel, the boat will still function since inflation is only needed for maximum performance not flotation. (col. 6, lns. 30-33).

In contrast, Applicant discloses a modular watercraft capable of both surface and submersible accommodation of passengers. The watercraft can dive below the surface of the water and can accommodate surface travel in a model akin to a conventional speedboat. (p. 2, lns. 17-21). Also, the watercraft includes a sealable, pressurizable passenger compartment. (p. 4, lns. 2-3). The passenger compartment is the only component that is a pressure vessel limiting the weight and complexity of building such a craft. The cabin is a pressure vessel or pressure hull, meaning that it withstands outside pressure by the strength of its construction. Under normal circumstances, it is never pressurized. It remains at 14.7 psi due to the fact that it is so strong that it cannot compress, therefore, keeping the air inside from compressing. (p. 4, lns. 10-15).

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success.

Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. (MPEP §2143).

Initially, Applicant respectfully contends that there is no suggestion or motivation to combine Neil and Syfritt. Neil teaches a watercraft which is submersible, while Syfritt teaches a non-submersible watercraft. Neil's submersible watercraft has a hull that includes a cockpit with an open bottom for allowing passengers access to the cockpit. Air is supplied to the cockpit to form an air bubble from which the passengers may breathe freely. Syfritt's watercraft, on the other hand, is a boat. In one embodiment, the boat has a rigid hull design with water-tight seals interconnecting various hull modules. In another embodiment, the boat has inflatable chambers or sponsons. In both embodiments, Syfritt's boat is not designed to be submersible. If the rigid hull design were to be submersed, the water-tight seals would become irrelevant since water would fill the hull. As previously described, the sponsons of the inflatable hull design are needed for maximum performance, not flotation. As such, deflating the sponsons still does not make Syfritt's boat a submersible watercraft. Therefore, Applicant submits that neither the references themselves nor the knowledge of one with ordinary skill in the art would provide motivation to combine Neil's submersible watercraft with Syfritt's boat that is designed not be submersed.

Applicant further contends that no reasonable expectation of success is achieved in combining Neil and Syfritt. As previously explained, Neil teaches a submersible watercraft. Therefore, to modify Neil's submersible watercraft with Syfritt's water-tight hull and inflatable sponsons would produce a submersible watercraft which would be prevented from submersing. Therefore, Applicant submits that no expectation of success is achievable with a non-submersible, submersible watercraft.

Furthermore, Applicant contends that Neil and Syfritt fail to teach all the elements of the rejected claims. With respect to amended independent claim 1, this claim recites, in part, a watercraft comprising a hull module which is a V-shaped speedboat-like hull and a passenger housing module which is a pressure vessel. As previously described and as known in the art, a pressure vessel or pressure cabin is one that withstands outside water pressure by the strength of its construction. On the inside of the housing compartment, the pressure remains generally at one atmosphere. Neither Neil nor Syfritt teaches or suggests a pressure housing compartment. Neil

uses a cockpit filled with pressurized air to house passengers, while Syfritt does not contemplate a pressure vessel since Syfritt's invention is a conventional boat, not a submersible.

Regarding independent claim 29, this claim currently recites, in part, a method of making a combination surface and submersible watercraft comprising the steps of manufacturing a hull module, a sealable pressurizable passenger compartment module, and an engine compartment module, and affixing the modules together. Like claim 1, claim 29 includes the patentable element of a pressure passenger compartment. That is, the passenger compartment is structurally capable of withstanding the pressure of water at depth.

Based on the foregoing, Applicant submits that amended claim 1 and claim 29 include unique combinations of watercraft modules having at least one element that is patentable over Neil and Syfritt. Applicant's watercraft provides the unique combination of modular construction, a true pressure cabin, and a hull capable of capable of traveling on the surface of the water akin to a speed boat.

Claims 2-7, 28, and 30 were rejected under 35 U.S.C. §103(a) as being unpatentable over Neil in view of Syfritt and in further view of U.S. Patent No. 4,458,618 to Tuffier ("Tuffier"). Claims 2-7 depend from amended claim 1, and claim 30 depends from claim 29. As previously provided, Applicant submits that claims 1 and 29 are patentable over the cited references. Accordingly, based on their dependencies, Applicant submits that claims 2-7 and 30 are patentable as well.

With respect to independent claim 28, Applicant contends that the combination of Neil, Syfritt, and Tuffier fails to establish a *prima facie* case of obviousness. Tuffier discloses a device which renders unsinkable a boat such as a habitable boat having a cabin and a cockpit. The device comprises inflatable envelopes placed in the cabin of the boat. (abstract). The device is also particularly appropriate for effectively maintaining a boat on the surface of the water. (col. 1, lns. 63-65).

Initially, Applicant contends that there is no suggestion or motivation to combine Tuffier with Neil and Syfritt. Tuffier, like Syfritt, teaches a watercraft which is designed not to be submersed. As such, there is no motivation to combine Neil's submersible watercraft with Tuffier's inflatable envelopes which render a watercraft unsinkable. Furthermore, no reasonable expectation of success is achieved in combining Neil and Tuffier. That is, there is no expectation

of success with an unsinkable, submersible watercraft. Moreover, Tuffier fails remedy the deficiencies of Neil and Syfritt with respect to teaching all the elements of claim 28. Claim 28 recites, in part, a submersible watercraft comprising a sealable, pressurizable passenger compartment, a hull, and an engine compartment. Claim 28 includes the element of a pressure passenger compartment. That is, the passenger cabin is a pressure vessel capable of withstanding outside water pressure by the strength of its construction. Tuffier, like Neil and Syfritt, fails to teach or suggest a pressure vessel/cabin.

Based on the foregoing, Applicant submits that claims 2-7, 28, and 30 are patentably distinct over Neil in view of Syfritt and in further view of Tuffier.

Claims 8, 9, and 23-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Neil in view of Syfritt and in further view of U.S. Patent No. 4,494,472 to Rougerie (“Rougerie ‘472”) (or perhaps the Examiner meant U.S. Patent No. 4,423,695 to Rougerie (“Rougerie ‘695”) because Rougerie ‘472 does not include “engine 38”). Claims 13-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Neil in view of Syfritt and in further view of U.S. Patent No. 4,928,614 to Forman (“Forman”). In response, Applicant respectfully submits that this rejection should be withdrawn.

Claims 8, 13-15, and 23-26 depend from amended claim 1. As previously provided, Applicant contends that amended claim 1 is patentable over the cited references. Based on at least their dependencies, Applicant submits that claims 8, 13-15, and 23-26 are patentable as well.

Regarding claim 9, Applicant respectfully contends that the cited references fail to teach all the claim elements. For example, claim 9 recites, *inter alia*, that the engine module permits water to enter up to a first height when said watercraft resides on the surface of a body of water and which permits water to enter up to a second height when said watercraft is submerged, such that an equalization of internal and external pressure is achieved. As previously described, Neil and Syfritt fail to teach or suggest a “partially floodable” engine compartment as claimed by the Applicant. Rougerie ‘695 discloses a floating, unsinkable nautical craft having a rigid hull and a compartment for passengers. (col. 2, lns. 50-54). The craft also includes a propulsion means 10 located at the rear of the craft. (col. 3, lns. 9-10). The propulsion means includes an engine of

any suitable type, in particular a diesel engine. (col. 5, lns. 66-67). As such, Rougerie '695 and Rougerie '472 also fail to teach or suggest a "partially floodable" engine compartment.

Claim 9 has been rewritten in independent form and includes most pre-amended claim elements including the patentably distinct, "partially floodable" engine compartment. Therefore, Applicant contends that amended claim 9 is patentable of the cited references.

Conclusion

In light of the foregoing remarks, this application is now in condition for an examination on the merits, and early action is respectfully requested. If any questions remain regarding this response or the application in general, a telephone call to the undersigned would be appreciated since this should expedite the prosecution of the application for all concerned. A fee of \$100 is believed to be due for one additional independent claim. A credit card payment form is provided herewith. Please charge any additional fees (or credit any overpayments of fees) to the Deposit Account of the undersigned, Account No. 503410 (Docket No. 7940-A03-003).

Respectfully submitted,

A handwritten signature in black ink, appearing to read "C. J. Menke", with a long horizontal flourish extending to the right.

Christopher J. Menke, Reg. # 53,316
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